



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D206-642-341BL
Job Sheet 192088



POSITIVE RECORD

EFFECTIVE 9-89 AUTH 9-89

RELEASED *[Signature]* DATE **MAY 15th 2019**

Part No: D206-642-341BL

Job Qty: 1 pcs

Part Name: Replacement Skidtube (Fits LH or RH)



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 3/15/19

Job Tracking No:

DAS

Due Date: 4/19/19

Created By: Marie Lajeunesse

55

Type: SOLD

Description:

9-89

Note: DWG D2650 REV.F(DEO) IPP Rev: H 05.10.11 Added D3429-1 per CHG004 KJ/CP/JLM IPP Rev: I 08-09-29 revF as per dwg DD verified by: EC Est Rev: J 09-03-02 as per DS19440 rev.a DD verified by: EC IPP rev K 10.08.03 chg ms27039-1-08 for "C" type EC ver: DD IPP Rev: L 12.11.22 now swage per ecn12-679 DD ver: JLM IPP Rev: M 14.04.25 ECN14-520 DD ver: JLM IPP REV: N 15.10.09 ADDED BL DD VER: JLM IPP REV: O 16.01.22 PAR16-484 DD VER: JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard Setup Hrs	Run Hrs	Workcenter/Supplier	Lead Time	Sign-off
110	Skidtubes - 1	1 pcs	4/19/19		0.00	1.58	Skidtubes - 1		
							Skidtubes - 2		
							Skidtubes - 3		
							Skidtubes - 4		
							Skidtubes - 5		
							Skidtubes - 6		
							Skidtubes - 7		
115	QC 5	1 pcs	4/19/19		0.00	0.00	QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 42		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		
							QC 5 - 58		
							QC 5 - 68		
							QC 5 - 9		
							QC 5 - 50		
							QC 5 - 30		
							QC 5 - 40		
116	QC 9	1 pcs	4/19/19		0.00	0.00	QC 9 - 10		
							QC 9 - 18		
							QC 9 - 24		



Dart Aerospace Ltd.
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CANADA
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Container No: S165103



Part: D206-642-341BL

Job No: 192088

Serial No/Batch: S165103

Revision: F(deo)

Inspector:

Exp Date:

Instructions: FAA STC SA00475SE 18/10/17, STC SH98-4 Issue 2, EASA STC

Plex 3/15/19 1:40 PM Dart.lajeunesse.marie

NCR: 19-7261

120 Handfinish - 1-1 Chemical-B4B	1 pcs	4/19/19	0.00 1.17	QC 9 - 43	
				QC 9 - 50	
				QC 9 - 9	AD 19.04.01
				Handfinish - 1 - 1 - B4B	
				Handfinish - 1 - 2 - B4B	
				Handfinish - 1 - 3 - B4B	
				Handfinish - 1 - 4 - B4B	
				Handfinish - 1 - 5 - B4B	
				Handfinish - 1 - 6 - B4B	
				Handfinish - 1 - 7 - B4B	
				Handfinish - 1 - 8 - B4B	
				Handfinish - 1 - 9 - B4B	
				Handfinish - 1 - 10 - B4B	DR 19/04/02
				Handfinish - 1 - 11 - B4B	
				Handfinish - 1 - 12 - B4B	
				Handfinish - 1 - 13 - B4B	
				Handfinish - 1 - 14 - B4B	
				Handfinish - 1 - 15 - B4B	
				Handfinish - 1 - 16 - B4B	
				Handfinish - 1 - 17 - B4B	
				Handfinish - 1 - 18 - B4B	
				Handfinish - 1 - 19 - B4B	
				Handfinish - 1 - 20 - B4B	
				Handfinish - 1 - 21 - B4B	
				Handfinish - 1 - 22 - B4B	
125 QC 7	1 pcs	4/19/19	0.00 0.00	QC 7 - 10	
				QC 7 - 13	
				QC 7 - 14	
				QC 7 - 15	
				QC 7 - 17	
				QC 7 - 18	
				QC 7 - 19	
				QC 7 - 2	
				QC 7 - 28	
				QC 7 - 3	
				QC 7 - 30	
				QC 7 - 34	
				QC 7 - 36	
				QC 7 - 37	
				QC 7 - 41	
				QC 7 - 47	
				QC 7 - 48	
				QC 7 - 51	
				QC 7 - 58	
				QC 7 - 59	
				QC 7 - 60	M66
				QC 7 - 9	
				QC 7 - 68	

130 Skidtubes - 2 - B4B	1 pcs	4/19/19	0.00 1.58	QC 7 - 50	
				QC 7 - 67	
				QC 7 - 40	
				Skidtubes - 1 - B4B	
				Skidtubes - 2 - B4B	
				Skidtubes - 3 - B4B	
				Skidtubes - 4 - B4B	
				Skidtubes - 5 - B4B	
140 QC 5	1 pcs	4/19/19	0.00 0.00	Skidtubes - 6 - B4B	
				Skidtubes - 7 - B4B	JK
				QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 42	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	
				QC 5 - 50	
				QC 5 - 30	DAS 40 9-89
				QC 5 - 40	
150 Skidtubes - 3 - B4B	1 pcs	4/19/19	0.00 1.58	Skidtubes - 1 - B4B	
				Skidtubes - 2 - B4B	
				Skidtubes - 3 - B4B	
				Skidtubes - 4 - B4B	TF
				Skidtubes - 5 - B4B	
				Skidtubes - 6 - B4B	
				Skidtubes - 7 - B4B	
180 QC 5	1 pcs	4/19/19	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 42	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	
				QC 5 - 50	
				QC 5 - 30	
				QC 5 - 40	DAS 40 9-89
190 Handfinish - 2-1 Pressure-B4B	1 pcs	4/19/19	0.00 1.17	Handfinish - 2 - 1 - B4B	
				Handfinish - 2 - 2 - B4B	DR 19/05/02
				Handfinish - 2 - 3 - B4B	
				Handfinish - 2 - 4 - B4B	
200 Outsource - 11 - Paint	1 pcs	4/19/19		ATE003-VC	3
195 spray paint				spray paint	

3/15/2019

[Dart Hawkesbury] Job Sheet - Lajeunesse, Marie

205 QC 6

1
pcs

4/19/19 0.00 0.00

QC 6 - 42

QC 6 - 9

QC 6 - 68

QC 6 - 61

210 QC 14

1
pcs

4/19/19 0.00 0.00

QC 14 - 15

QC 14 - 2

QC 14 - 34

QC 14 - 41

QC 14 - 51

QC 14 - 58

QC 14 - 59

QC 14 - 9

QC 14 - 68

QC 14 - 40

QC 14 - 19

POSITIVE
RECALL

PD.

Check saddle swage gap.

220 Handfinish - 4-1-Assembly-
B4B1
pcs

4/19/19 0.00 1.17

Handfinish - 4 - 1 - B4B

Handfinish - 4 - 10 -
B4BHandfinish - 4 - 11 -
B4BHandfinish - 4 - 12 -
B4BHandfinish - 4 - 13 -
B4BHandfinish - 4 - 14 -
B4BHandfinish - 4 - 15 -
B4B

Handfinish - 4 - 2 - B4B

Handfinish - 4 - 3 - B4B

Handfinish - 4 - 4 - B4B

Handfinish - 4 - 5 - B4B

Handfinish - 4 - 6 - B4B

Handfinish - 4 - 7 - B4B

Handfinish - 4 - 8 - B4B

Handfinish - 4 - 9 - B4B

230 QC 3

1
pcs

4/19/19 0.00 0.00

QC 3 - 10

QC 3 - 13

QC 3 - 15

QC 3 - 17

QC 3 - 18

QC 3 - 2

QC 3 - 28

QC 3 - 3

QC 3 - 30

QC 3 - 34

QC 3 - 36

QC 3 - 41

QC 3 - 51

QC 3 - 58

QC 3 - 59

QC 3 - 68

QC 3 - 9

QC 3 - 40

QC 3 - 19

240 QC 5

1
pcs

4/19/19 0.00 0.00

QC 5 - 10

QC 5 - 12

QC 5 - 17

QC 5 - 18

QC 5 - 19

DAS
15
9-89DAS
68
9-89

MAY 15 2019

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					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 42	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	DAS MAY 15 2019 68
					QC 5 - 9	9-89
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	
250 Packaging 3-1 - Stock - B4B	1	4/19/19	0.00 0.00	Packaging 3 - 1 - B4B		
pcs				Packaging 3 - 2 - B4B		
				Packaging 3 - 3 - B4B		
				Packaging 3 - 4 - B4B		
				Packaging 3 - 5 - B4B		
				Packaging 3 - 6 - B4B		
				Packaging 3 - 7 - B4B		
				Packaging 3 - 8 - B4B		
				Packaging 3 - 9 - B4B		
				Packaging 3 - 10 - B4B		
				Packaging 3 - 11 - B4B		
				Packaging 3 - 12 - B4B		
				Packaging 3 - 13 - B4B		
				Packaging 3 - 14 - B4B		
				Packaging 3 - 15 - B4B		
				Packaging 3 - 16 - B4B		
				Packaging 3 - 17 - B4B		
				Packaging 3 - 18 - B4B		
				Packaging 3 - 19 - B4B		
				Packaging 3 - 20 - B4B		
				Packaging 3 - 21 - B4B		
				Packaging 3 - 22 - B4B		
				Packaging 3 - 23 - B4B		
				Packaging 3 - 24 - B4B		
				Packaging 3 - 25 - B4B		
				Packaging 3 - 26 - B4B		
				Packaging 3 - 27 - B4B		
				Packaging 3 - 28 - B4B		
				Packaging 3 - 29 - B4B		
				Packaging 3 - 30 - B4B		
				Packaging 3 - 31 - B4B		
				Packaging 3 - 32 - B4B		
				Packaging 3 - 33 - B4B		
				Packaging 3 - 34 - B4B		
				Packaging 3 - 35 - B4B		
				Packaging 3 - 36 - B4B		
255 DC - 1 - B4B	1	4/19/19	0.00 0.00	DC - 1 - B4B		DAS
pcs				DC - 2 - B4B		21 MAY 17 2019
260 QC 21 - FG	1	4/19/19	0.00 0.00	QC 21 - FG - 21		9-89
pcs				QC 21 - FG - 70		
				QC 21 - FG - 53		DAS MAY 17 2019
Part Op 110 - Skid tubes 1-Debur Fwd edge of tube 2-Scribe "Identify Batch Number" 3-Remove ridge on inside of Fwd edge of Descriptions: tubeas per Dwg D2650 4-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required. A/R Aluminum Rod 138989 5-Grind weld flush to cap on top surface only. 6-Cut aft end to length as per dwg D2650 7-Drill pilot holes using drill Jlg DT8168A (A, & B) and DT8025. 8-Drill holes for wearplates using DT 8028-5. Open to Ø 0.297". 9-Open Aft Cap Hole using #6 Drill Bit 10-Open holes for Tow Ring to Ø0.625" as per Dwg D2650, D2650-5 Drilling Detail 11-Remove inner indexing ridge on aft end of skid tubeas per Dwg D2650 12- Ream holes to finished size						

as per Dwg D2650, D2650-5 Drilling Detail (without cutting fluid) 13-Deburr.

115 - QC5- Inspect part completeness to step on W/O

116 - QC9- Inspect visual per QSI004- Fusion Welds

120 - Chemical Conversion Coat per QSI005 4.1

125 - QC7-Inspect Chemical Conversion Coat

130 - Skid tubes - 1- Bond D2654-5 web in place as per QSI 015 Ensure holes line up Allow 12 Hrs. cure time before cutting Start Date: 19-04-5 Time: 9:00 AM Finish Date: 19-04-05 Time: 9:00 PM A/R Sikaflex-291

5163445 Sikaflex expiry date: 19-04-23

140 - QC5- Inspect part completeness to step on W/O

150 - Skid tubes - 1- Insert D4720-1 Spacer. Swage to 0.313" X 0.75" DP per QSI 002. Trim and grind flush per QSI 002

180 - QC5- Inspect part completeness to step on W/O

190 - Pressure Wash per QSI005 4.3/ Clean and remove all markings

200 - ISSUE PO _____ Prime and Paint DELFLEET BLUE Prime: S179337 Blue: S156229 Clear: S173354

205 - QC6- All purchased or subcontracted products

210 - QC14- Inspect Spray Paint

220 - HandFinish4 (Assemble as per dwg - 1-Install inserts & wearpads as per dwg D2922. Use a drop of Sikaflex inside insert holes before installing wearpad/wearplate. A/R Sikaflex-291 513843 Sikaflex expiry date: 19-5-8 2-

Install O-Rings D2651-3 on plugs D2651-1 with Petroleum Jelly and install plugs as per Dwg D2650. Clean excess adhesive 3-Install MS27039-4-06 Screw 4-Inspect for foreign object per QSI 024 5-Install D2646 Aft Cap and seal with

SikaflexClean excess adhesive A/R Sikaflex-291 5113003 Sikaflex expiry date: 19-5-0 6- Install D2680-041

Nut Plate as per Dwg D2650 7-Wing Walk as per Dwg D2650-5 and QSI 005 4.4 Batch: 5163430

230 - QC3- Inspect Part Finish

240 - QC5- Inspect part completeness to step on W/O

250 - Identify and pack for shipping as per PPP D206-642-341 Location: FG083

255 - Document Control - Photocopy bluefile and create labels per PPP D206-642-341 CHG005

260 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2620	Skid tube, 206 Skid tube	1 pcs (1 ea)	110-Skid tubes - 1	5150650
D2647	Cap	1 pcs (1 ea)	110-Skid tubes - 1	5089985
D2654-5	Web	1 pcs (1 ea)	130-Skid tubes - 2 - B4B	5141178
D4720-1	Spacer	19 pcs (19 ea)	150-Skid tubes - 3 - B4B	5154519
ALS4-1032-130	Rivnut	54 Ea (54 ea)	220-Handfinish - 4-1-Assembly-B4B	5057257
CCR264SS3-3	Cherry Rivet	2 Ea (2 ea)	220-Handfinish - 4-1-Assembly-B4B	51137622
CR3212-4-03	Cherry Rivet	2 Ea (2 ea)	220-Handfinish - 4-1-Assembly-B4B	511378860
D2646BL	Aft Cap	1 pcs (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5123320
D2651-1BL	Plug	14 pcs (14 ea)	220-Handfinish - 4-1-Assembly-B4B	5167942
D2651-3	O-Ring	14 pcs (14 ea)	220-Handfinish - 4-1-Assembly-B4B	5044502
D2680-041BL	Nut Plate	1 pcs (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5169112
D3537-1	Wearpad	6 pcs (6 ea)	220-Handfinish - 4-1-Assembly-B4B	5174707
D3537-3	Wearpad	1 pcs (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5114663
D4956-11	Wearplate Fwd	1 pcs (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5037774
D4956-23	Wearplate Center Fwd	1 pcs (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5171627
D4956-35	Wearplate Aft	1 pcs (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5172574
MS27039-1-08	Screw	2 Ea (2 ea)	220-Handfinish - 4-1-Assembly-B4B	5133202
MS27039-4-06	Screw	1 Ea (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5167302
MS27039C1-08	Screw	54 Ea (54 ea)	220-Handfinish - 4-1-Assembly-B4B	5166974-1
NAS1149C0332R	Washer	54 Ea (54 ea)	220-Handfinish - 4-1-Assembly-B4B	5140669
NAS1149D0332J	Washer	2 Ea (2 ea)	220-Handfinish - 4-1-Assembly-B4B	5123446
NAS1149D0463J	Washer	1 Ea (1 ea)	220-Handfinish - 4-1-Assembly-B4B	5160500

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
110-Skidtubes - 1	D2620	1	10	0
	D2647	1	8	0
	D2654-5	1	11	0
	D4720-1	19	383	0
130-Skidtubes - 2 - B4B	ALS4-1032-130	54	9,221	0
150-Skidtubes - 3 - B4B	CCR264SS3-3	2	243	0
220-Handfinish - 4-1-Assembly-B4B	CR3212-4-03	2	120	0
	D2646BL	1	5	0
	D2651-1BL	14	54	0
	D2651-3	14	382	0
	D2680-041BL	1	0	0
	D3537-1	6	45	0
	D3537-3	1	22	0
	D4956-11	1	11	0
	D4956-23	1	6	0
	D4956-35	1	1	0
	MS27039-1-08	2	546	0
	MS27039-4-06	1	13	0
	MS27039C1-08	54	420	0
	NAS1149C0332R	54	5,103	0
	NAS1149D0332J	2	2,991	0
	NAS1149D0463J	1	6,901	0
Part Specifications				
Specifications could not be found.				

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QTY	QTY	QTY	QTY	PART NUMBER	DESCRIPTION
-1	-3	-5	-7		
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
	1			D2654-3	WEB
		1		D2654-5	WEB
1	1	1	1	D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
17	18	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN860UD10L	WASHER
2	2	2	2	CR2646S3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN860UD416	WASHER
52	52			CR3212-4-04	RIVET

F

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: N/A
 - 8) WELD PER DART QSI 004
 - 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
 - 10) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-24/1-291 ADHESIVE PER DART QSI 015
 - 11) INSERT D2651-1 PLUG CW D2651-3 O-RING IN HOLES MARKED "P" (BOTH SIDES OF TUBE)
 - 12) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
 - 13) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

SHOP COPY
RETURN TO
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 19-2088 1105-15
19-03-15

DEO ATTACHED

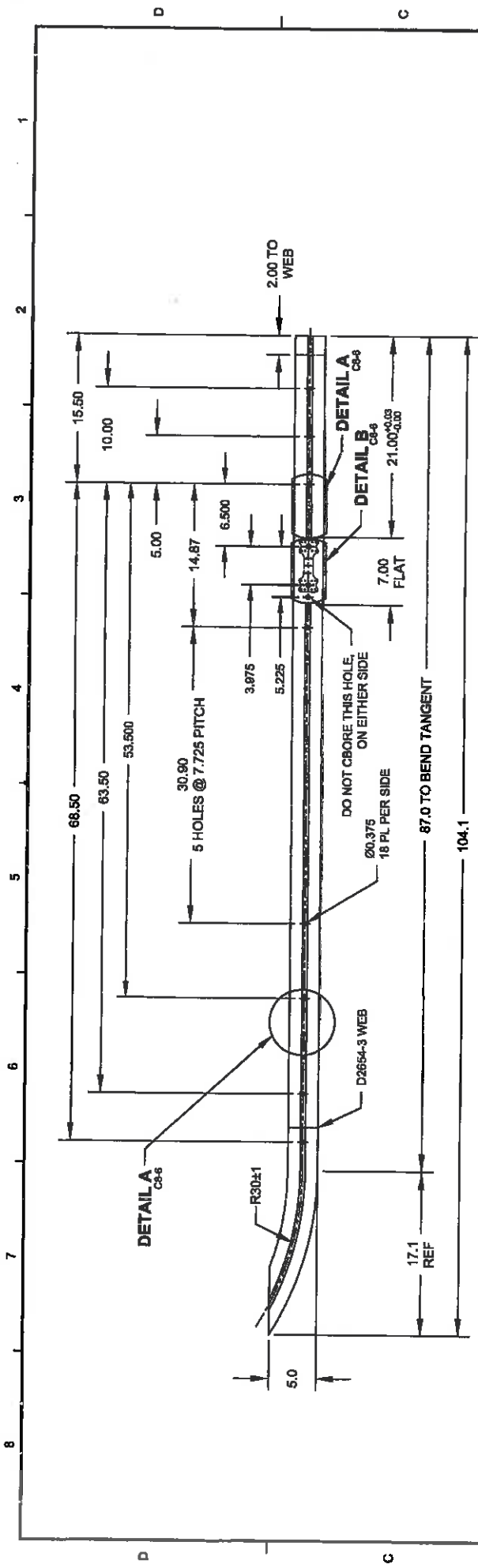
RELEASED

F	DRAWING UPDATED TO CURRENT STANDARDS. SHT 6 ADDED. ALL SECTION AND DETAIL VIEWS TRANSFERRED TO SHT 6, SHT 1 IN PL PART D2649 QTY UPDATED. SHT 6 SECT C-C GRIND INSTRUCTIONS DELETED FROM NOTE 7 (SEE NCR 239).	AJS	08.08.08
E	REMOVE CORE, CHG DRILL, ADD CHAMFER	CP	08.03.30
D	REDRAW; INCORP. DEO913681639763 MOD GROUND HANDLING ON D2650-1/3	CP	04.05.17
C	CHANGE HOLE PATTERN AND FRONT END	DS	97.10.29
B	AS MANUFACTURED CHANGES	DS	97.06.26
A	NEW ISSUE	DS	87.03.25
REV.	DESCRIPTION	BY	DATE
DRAWN	DS		
CHECKED	AJS		
MFG. APPR.			
APPROVED	D2650	DRAWING NO.	REV. F
DE APPR.		TITLE	SHEET 1 OF 6
DATE	08.08.08	208/407 SKIDTUBE ASSEMBLIES	SCALE
			NTS

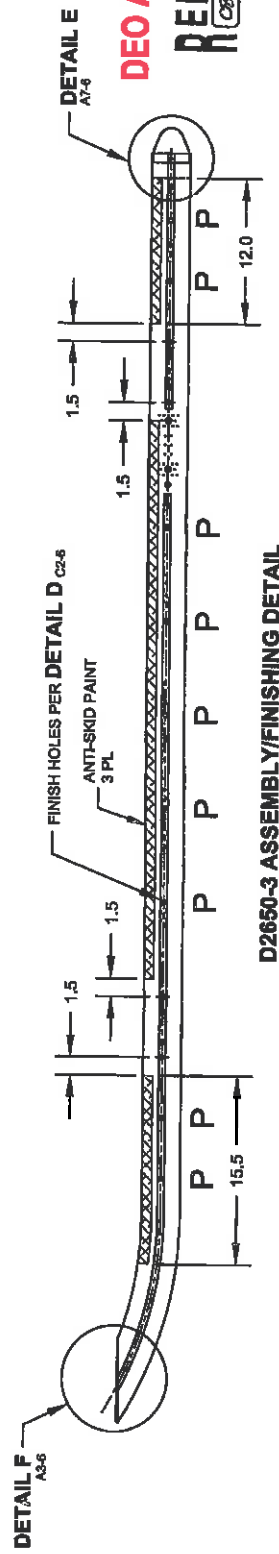
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DEO ATTACHED



D2650-3 BENDING/DRILLING DETAIL

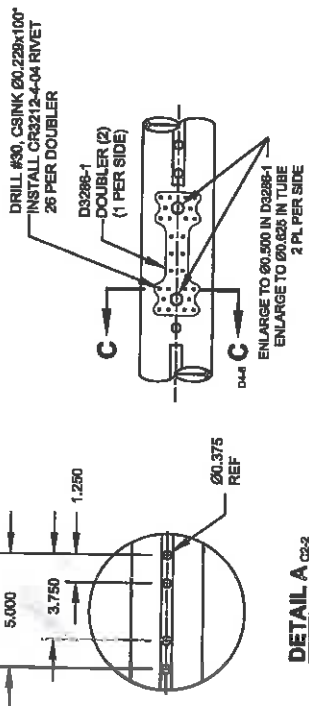


D2650-3 ASSEMBLY/FINISHING DETAIL

DEO ATTACHED
RELEASED
R 08 07 02 1180

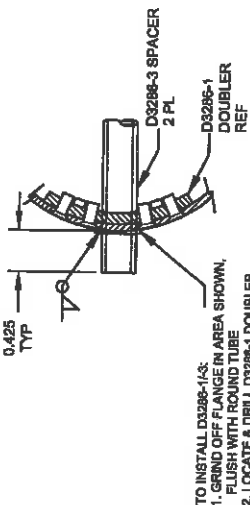
DESIGN	DS	DART AEROSPACE USA, INC.
DRAWN	AJS	PORT HADLOCK, WA
CHECKED		
INFO. APPR.	D2650	REV. F
APPROVED		SHEET 3 OF 8
DATE	08.08.08	SCALE
		NTS
		TITLE
		206/407 SKIDTUBE ASSEMBLIES
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SECTION C-C C7-8
SCALE NONE

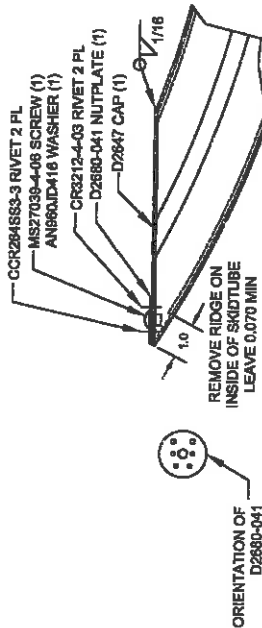
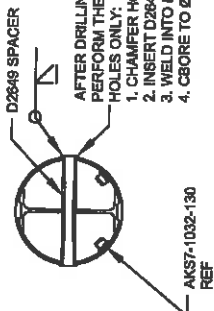


DETAIL A C2-2
SCALE 2X D2-2
D2-3
D2-4
D2-5
D2-6

DETAIL B C3-2
SCALE 2X C3-3
C3-4
C3-5
C3-6
C3-7



DETAIL D B4-2
B4-3
B4-4
B4-5
FOR 0.0375 HOLES ONLY
SCALE 3X



DETAIL E B5-2
SCALE 2X B5-3
B5-4
B5-5
B5-6

DETAIL F NOTES:
1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2847 (TRIM AS NECESSARY)
4. WELD D2847 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D2880-041 NUT PLATE IN PLACE
NOTE: MASK THREADS IN D2880-041 PRIOR TO FINISH

DETAIL F B6-2
SCALE NONE B6-3
B6-4
B6-5

RELEASED
05 11 22 1988

DEO ATTACHED

DESIGN	DS	DART AEROSPACE USA, INC
DRAWN	AJS	PORT HADLOCK, WA
CHECKED		DRAWING NO. REV. F
MFG. APPR.		D2860 SHEET 8 OF 8
APPROVED		TITLE SCALE
DATE	08.08.08	208/407 SKIDTUBE ASSEMBLIES NTS

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DRAWING NO. D2650	TITLE 206/407 SKIDTUBE ASSEMBLIES	REV. F	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D2650-F-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN 12.10.12	CHECKED A.O.	DATE 12.10.22	MFG. APPR. [Signature]	APPROVED [Signature]	DE APPR. [Signature]		
DATE 12.10.12	DATE 12.10.22	DATE 12.10.22	DATE 12.10.22	DATE 12.10.22	DATE 12.10.22		

PURPOSE:

CHANGE C'BORED WELDED CROSSBOLT SPACERS TO SWAGED SPACERS

CHANGE:

PARTS LIST IS AMENDED AS FOLLOWS:

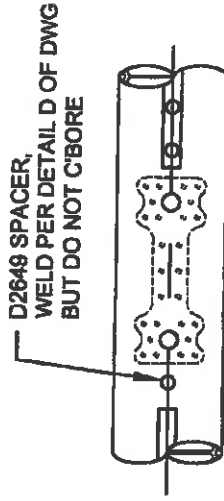
IS:

QTY	QTY	QTY	QTY	DESCRIPTION
-1	-3	-5	-7	
1	1	0	0	CROSS BOLT SPACER
16	17	19	23	D4720-1 SPACER

WAS:

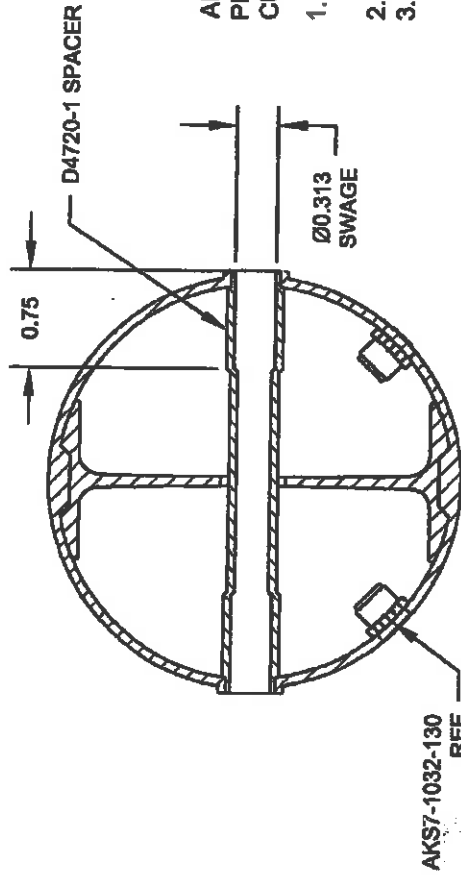
17	18	19	23	D2649	CROSS BOLT SPACER
----	----	----	----	-------	-------------------

ADD DETAIL G BELOW, WHICH IS THE SAME SECTION VIEW AS DETAIL D OF DWG. C'BORED HOLES ARE NOW SWAGED PER DETAIL G BELOW. FOR THE Ø0.375 HOLE THAT IS NOT C'BORED, WELD PER DETAIL D OF DWG (SEE AMENDED DETAIL B FOR REFERENCE).



DETAIL B

AMENDMENT TO DETAIL B
NOT TO SCALE



DETAIL G

FOR Ø0.375 HOLES ONLY
FOR HOLES THAT ARE CURRENTLY C'BORED ONLY
NOT TO SCALE

AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.375 HOLES THAT ARE
CURRENTLY C'BORED:

1. INSERT D4720-1 SPACER, 16 PL (-1) OR 17 PL (-3)
OR 19 PL (-5) OR 23 PL (-7)
2. SWAGE TO Ø0.313 X 0.75 DP PER QSI 002
3. TRIM / GRIND FLUSH PER QSI 002

RELEASED
2012-11-16

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐



Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Eng. (Non-AW) ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Large Fab ☐ Finishing ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐																													
Date : _____		Sequence #: _____		QTY Affected : _____																													
Description Work Order Deviation		Disposition																															
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY <table border="1"> <tr> <td>Pressure/Forced</td> <td>Contamination</td> <td>Power Loss/Surge</td> <td>Positioned Wrong</td> </tr> <tr> <td>Bending</td> <td>Misaligned/off center</td> <td>Folio/Program</td> <td>Outside Tolerance</td> </tr> <tr> <td>Crushing</td> <td>BOM/Route</td> <td>Grain Direction</td> <td>Drawing</td> </tr> <tr> <td>Cracks</td> <td>Broken/Damage/Defect</td> <td>Weld</td> <td>Finish</td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave/Twist</td> <td>Incomplete/Unclear Instructions</td> <td>Wrong Stock Pulled</td> <td>Part Lost/Missing</td> </tr> <tr> <td>Marks/Chatter</td> <td>Drill Holes</td> <td>Out of Sequence</td> <td>Misread</td> </tr> <tr> <td>Mislabeled</td> <td>Fit/Function</td> <td>Off-set/Set-up</td> <td></td> </tr> </table>				Pressure/Forced	Contamination	Power Loss/Surge	Positioned Wrong	Bending	Misaligned/off center	Folio/Program	Outside Tolerance	Crushing	BOM/Route	Grain Direction	Drawing	Cracks	Broken/Damage/Defect	Weld	Finish	Crimp/Kink/Ripple/Wave/Twist	Incomplete/Unclear Instructions	Wrong Stock Pulled	Part Lost/Missing	Marks/Chatter	Drill Holes	Out of Sequence	Misread	Mislabeled	Fit/Function	Off-set/Set-up	
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Marks/Chatter	Drill Holes	Out of Sequence	Misread																														
Mislabeled	Fit/Function	Off-set/Set-up																															
Other/Details: _____		Completed By _____																															
Lead hand / Supervisor _____		QC / QA Coordinator _____																															

md
July 9, 2019

Entered: _____

Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. 19-7261

Route update only



DISPOSITION		DEPARTMENT/PROCESS			
Job: 192088	Rework ☒ Scrap ☐ Use-as-is ☐	Skid-tube ☐ Machining ☐ Large Fab ☐	Cross tube ☐ Small Fab ☐ Finishing ☐	Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐	Engineering ☒ Water Jet ☐ Supplier ☐ Quality ☐
Date: 19/3/21	Sequence #: _____	QTY Affected: _____			
Description Work Order Deviation		Disposition			
Dwg calls for $\phi 0.625$ TOW RING HOLE.		DRILL TOW RING HOLE $\phi 0.640$ Ref. dwg D3274 Rev. 4. 19/3/21			
Root Cause		MRB (Q51042) INSP 12 of 15/3/21 Completed By: [Signature] Lead hand / Supervisor: Juan Luis Menand QC / QA Coordinator: [Signature] DAS 55 9-89 July 5, 2019			
Operator ☒ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY			
Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐		Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☒ Drill Holes ☐ Fit/Function ☐			
Other/Details:		Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐			